09/857923

J. Taylor
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Sheet 1/9

FIG. 1

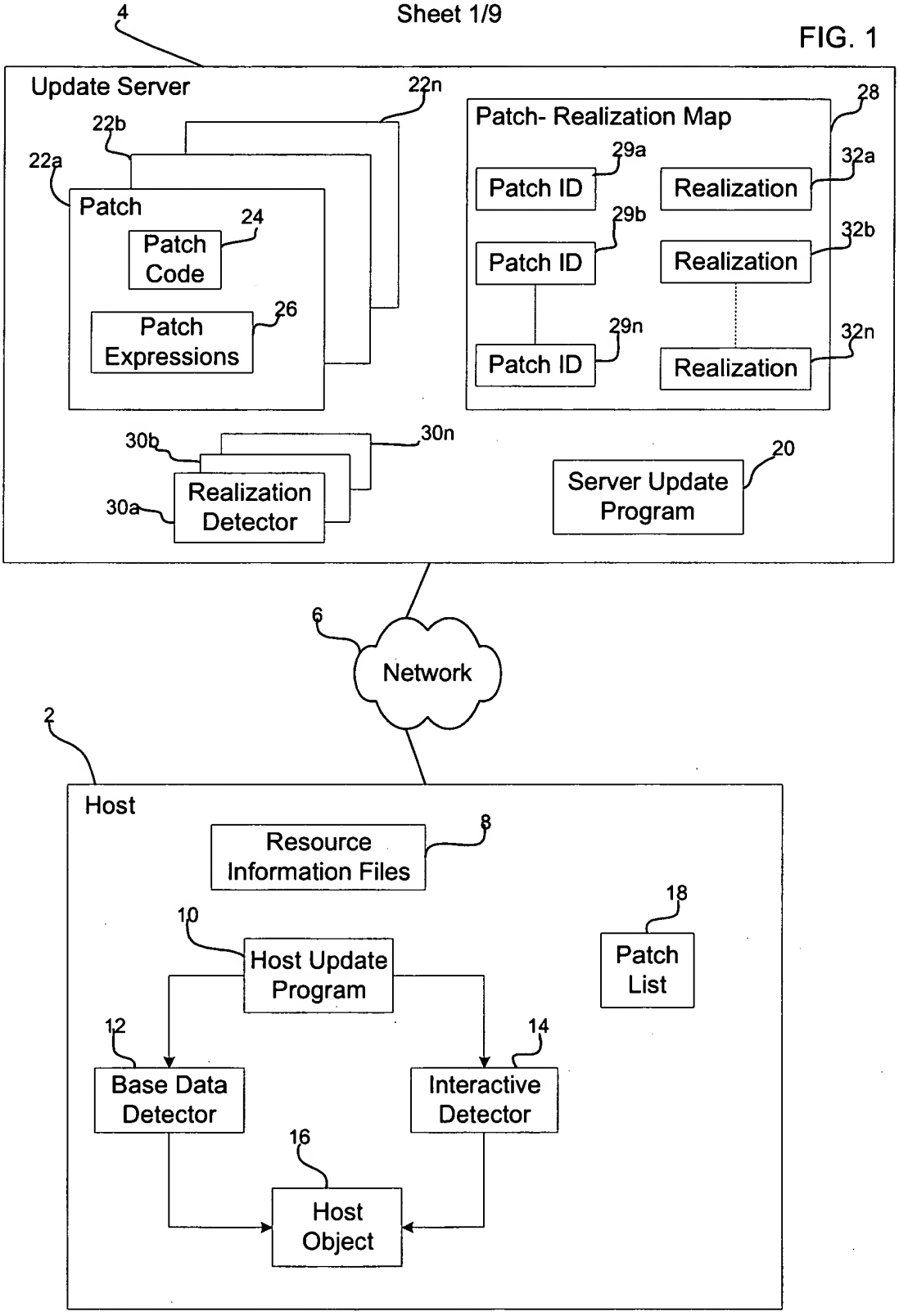


FIG. 2

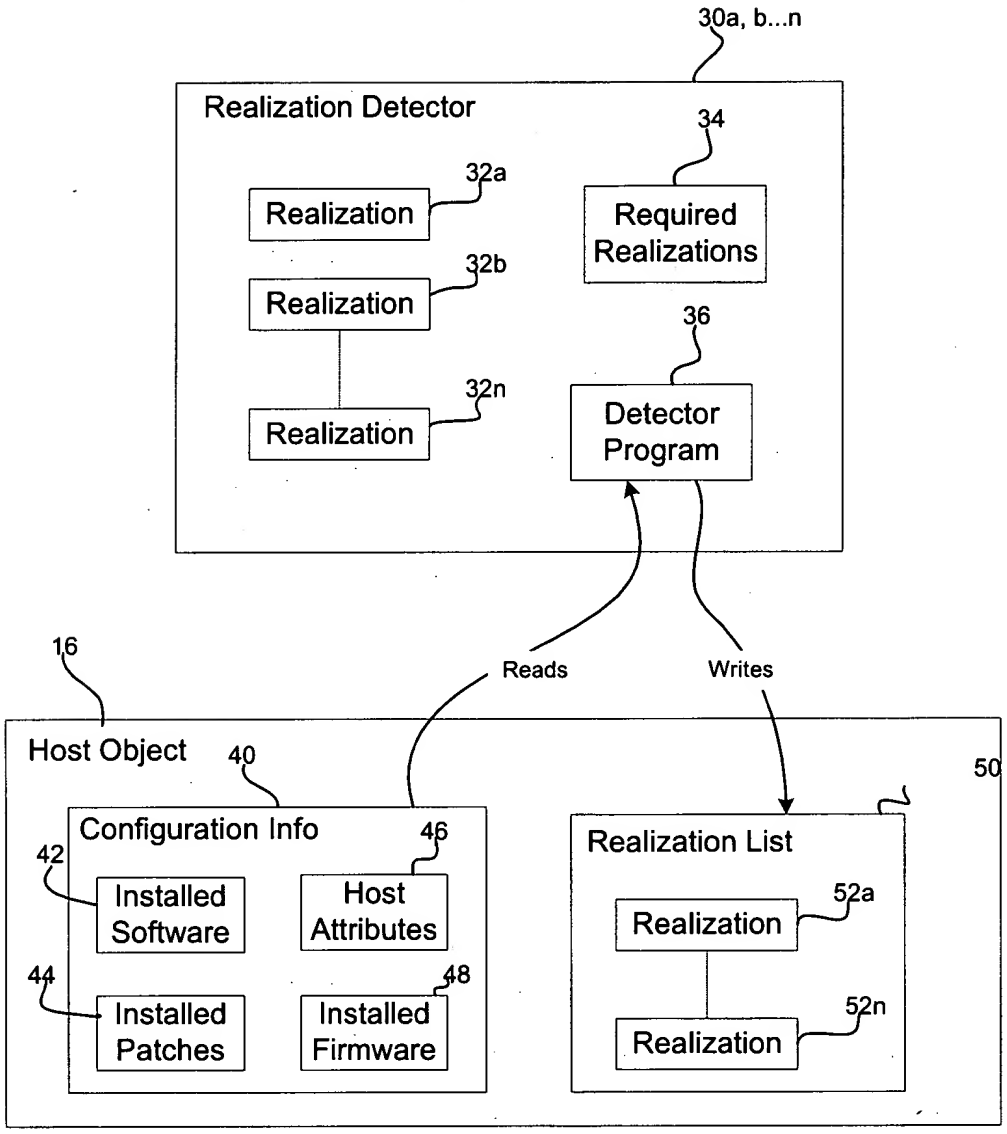
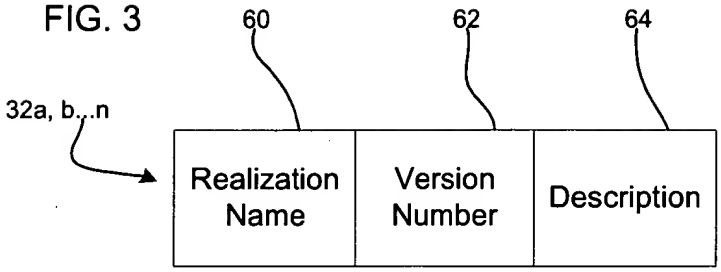
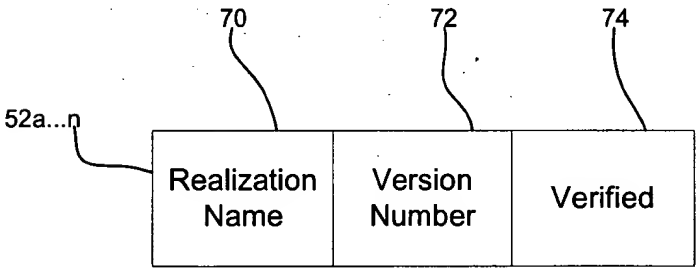

30a, b...n
Realization Detector
34
32a
Realization
Required Realizations
32b
Realization
36
32n
Realization
Detector Program
16
Reads
Writes
Host Object
40
50
Configuration Info
46
42
Installed Software
Host Attributes
44
48
Installed Patches
Installed Firmware
Realization List
52a
Realization
52n
Realization

FIG. 3



Realization

FIG. 4



Realization List Entry

FIG. 5

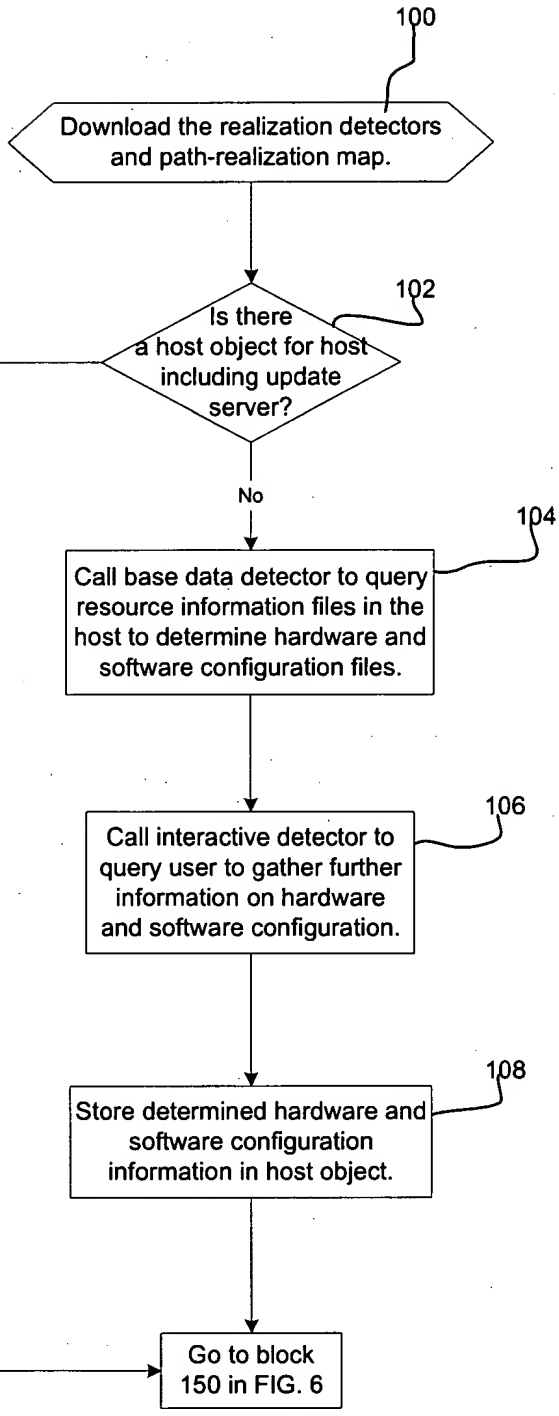

100
Download the realization detectors and path-realization map.
102
Is there a host object for host including update server?
No
Yes
104
Call base data detector to query resource information files in the host to determine hardware and software configuration files.
106
Call interactive detector to query user to gather further information on hardware and software configuration.
108
Store determined hardware and software configuration information in host object.
Go to block 150 in FIG. 6

FIG. 6

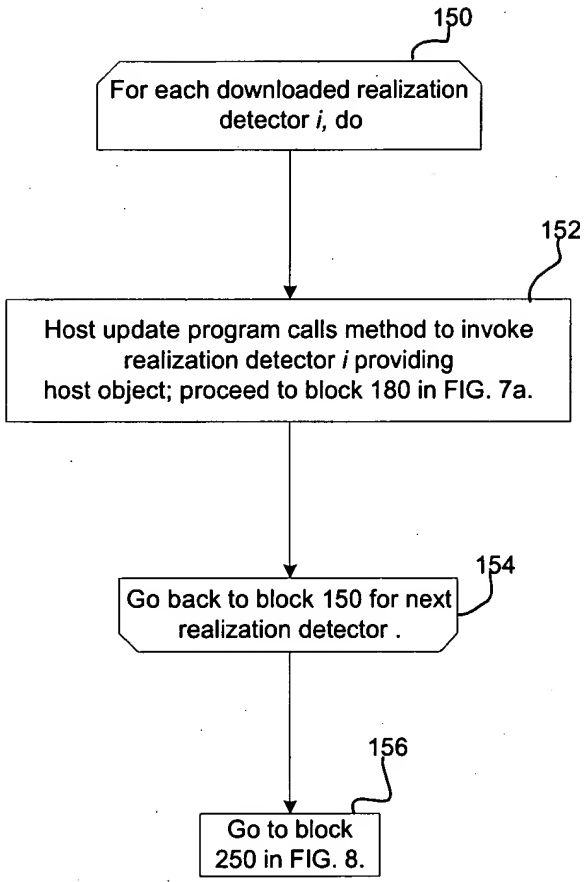
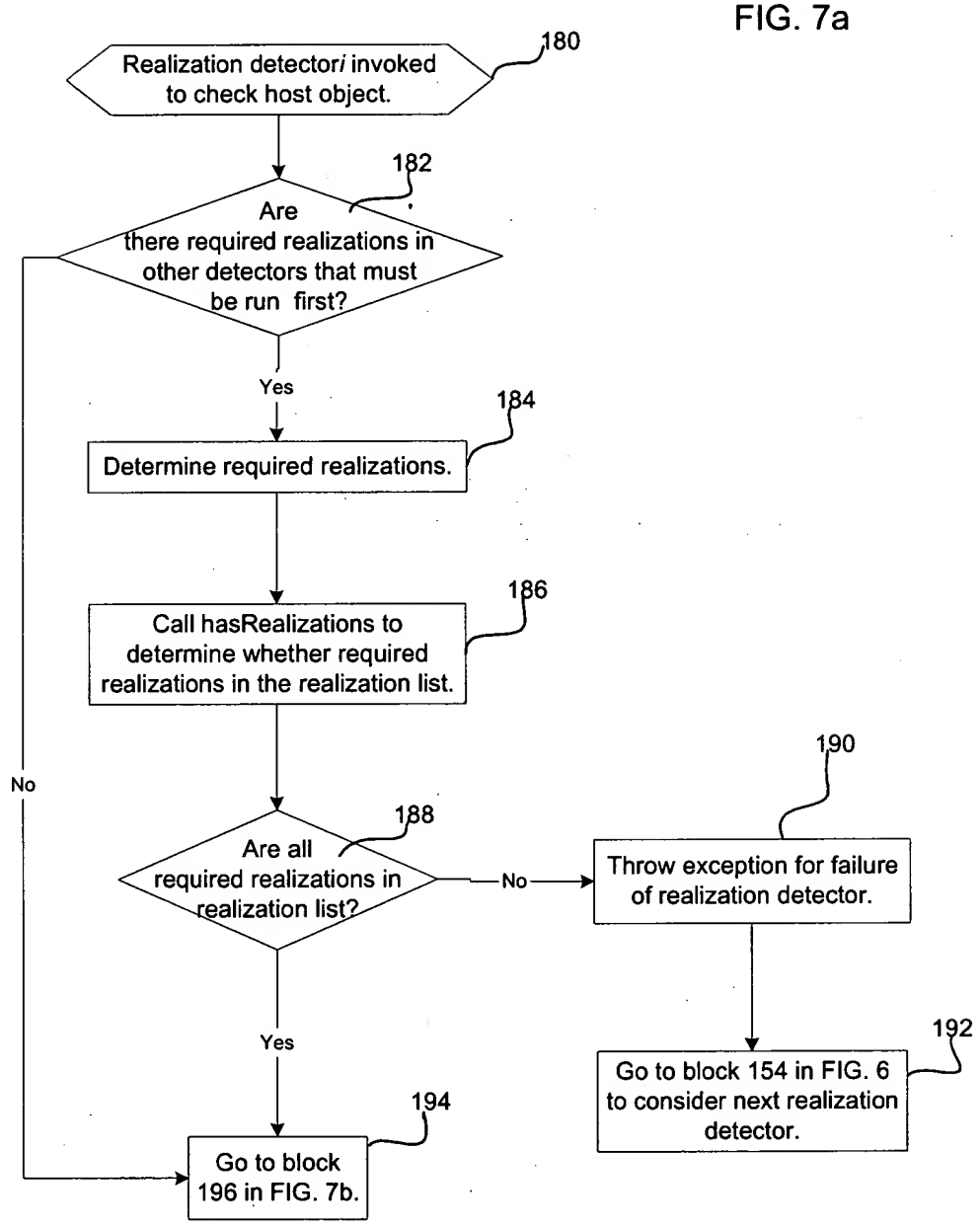

150
For each downloaded realization detector *i*, do
152
Host update program calls method to invoke realization detector *i* providing host object; proceed to block 180 in FIG. 7a.
154
Go back to block 150 for next realization detector .
156
Go to block 250 in FIG. 8.

FIG. 7a


Realization detector*i* invoked to check host object.
180
Are there required realizations in other detectors that must be run first?
182
Yes
No
Determine required realizations.
184
Call hasRealizations to determine whether required realizations in the realization list.
186
Are all required realizations in realization list?
188
No
Yes
Throw exception for failure of realization detector.
190
Go to block 154 in FIG. 6 to consider next realization detector.
192
Go to block 196 in FIG. 7b.
194

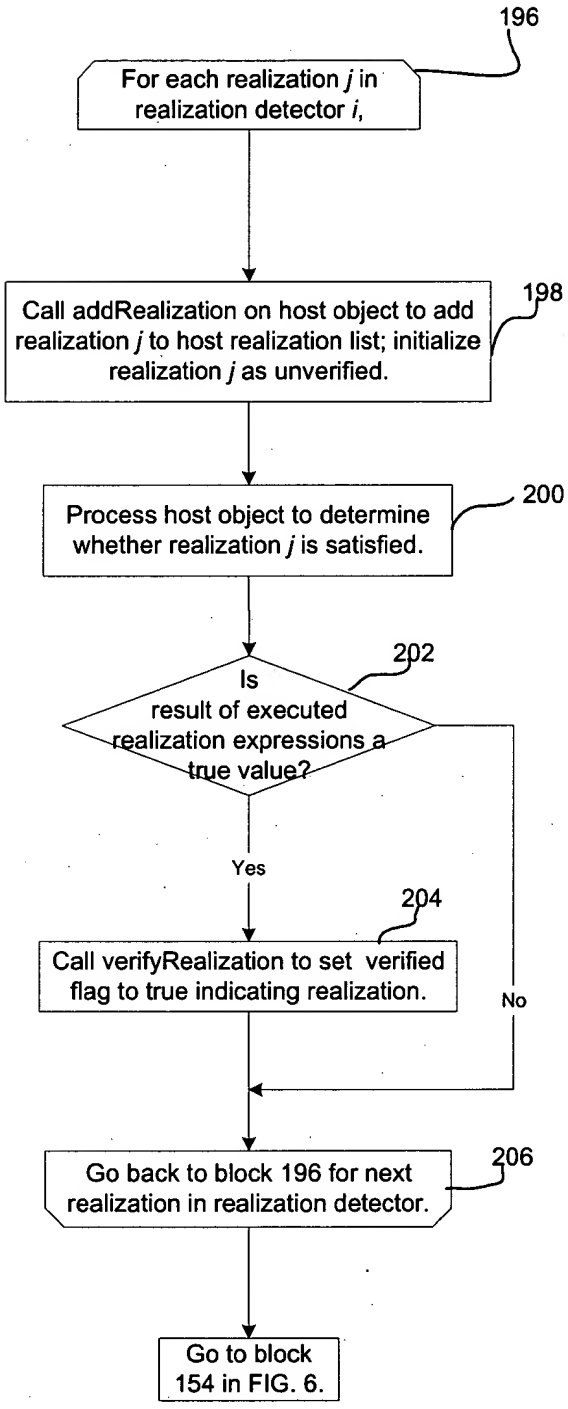

196
For each realization j in realization detector i,
Call addRealization on host object to add realization j to host realization list; initialize realization j as unverified.
198
Process host object to determine whether realization j is satisfied.
200
Is result of executed realization expressions a true value?
202
Yes
No
Call verifyRealization to set verified flag to true indicating realization.
204
Go back to block 196 for next realization in realization detector.
206
Go to block 154 in FIG. 6.

FIG. 7b

FIG. 8

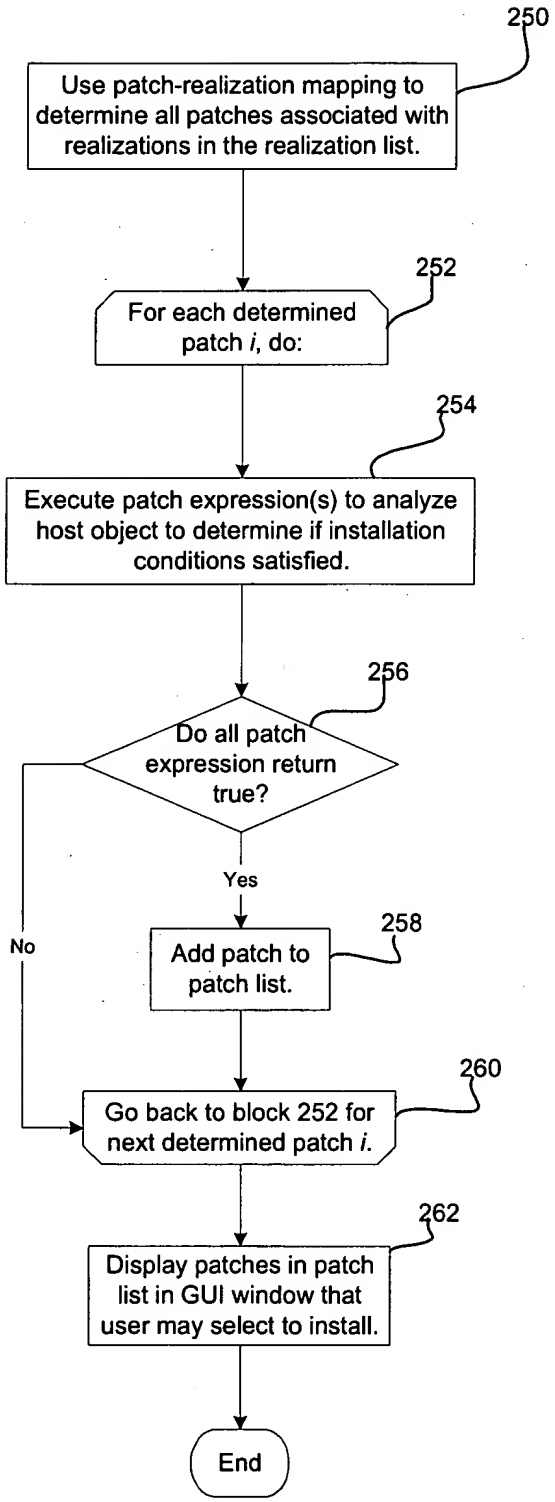
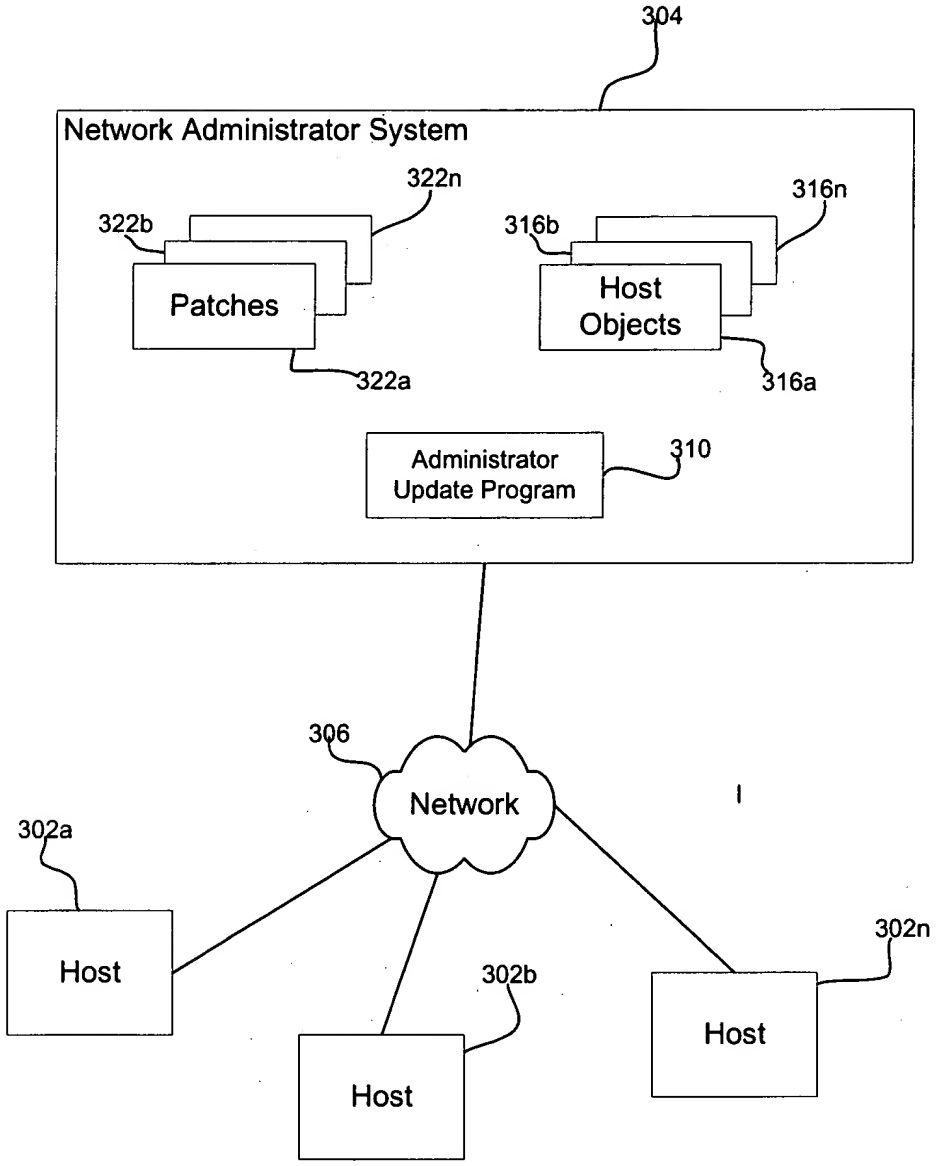

250
Use patch-realization mapping to determine all patches associated with realizations in the realization list.
252
For each determined patch *i*, do:
254
Execute patch expression(s) to analyze host object to determine if installation conditions satisfied.
256
Do all patch expression return true?
Yes
No
258
Add patch to patch list.
260
Go back to block 252 for next determined patch *i*.
262
Display patches in patch list in GUI window that user may select to install.
End

FIG. 9


304
Network Administrator System
322n
322b
Patches
322a
316n
316b
Host Objects
316a
Administrator Update Program
310
306
Network
302a
Host
302b
Host
302n
Host